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ABSTRACT

At San Juan College, the effectiveness of student basic skills assessment and course placement advisement was significantly improved through the implementation of Computerized Placement Testing (CPT). The CPT lab houses 15 personal computers and is staffed by professional counselors and student services aides. Students are not allowed to leave the testing area with their results until a counselor or advisor has reviewed their scores and computerized placement recommendation with them. The system allows for assessment results to be immediately available on-line at other college offices involved in the assessment and placement process. In addition to the reading, mathematics, and English skills placement tests, students complete an on-line questionnaire soliciting student demographic and educational goals information. Benefits of the system include the following: (1) the CPT system permits on-demand testing as well as scheduled testing for both individuals and groups; (2) it increases accuracy in assessing student's entry-level skills for the entire range of skills covered by the test instrument; (3) it provides immediate on-line scoring feedback to students, counselors, and advisors; (4) it reduces student frustration with re-testing by generating appropriate questions based upon a student's previous responses; (5) it reduces anxiety associated with timed testing; (6) it is less time-consuming than paper and pencil tests; and (7) it allows for easy equating of test norms to other on-line testing instruments and data. This report includes a glossary of assessment terms; a sample student placement report with test results and course recommendations; a copy of the demographic data questionnaire; and results of a survey of CPT users. (PAA)

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SAN JUAN COLLEGE

COMPUTERIZED BASIC SKILLS ASSESSMENT AND PLACEMENT

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COMPUTERIZED BASIC SKILLS ASSESSMENT AND PLACEMENT

Incorporating a user friendly assessment instrument and one that is convenient for the student became a top priority at San Juan College in the 1987-88 school year. Assessment for basic skills has become a critical point in the matriculation process, which helps assure appropriate course placement and academic success for students.

San Juan College's trademark has been one of innovation and excellence in its programs. So it was no surprise that its President, Dr. James Henderson, supported this new concept as presented by Dan Chacon, Dean of Student Services.

The old system included a timed paper and pencil test (ASSET). The instrument was successful; however, only a limited number of students took it because of the availability of test dates. It required heavy use of professional staff to administer the test.

The genesis of this project began with the evaluation of the 1988 research project by the League for Innovation in the Community Colleges, entitled "The State of the Art in Assessment at Three Community Colleges". After some initial research and conversation with the College Board, a decision was made to actively pursue the development of a plan to implement Computerized Assessment at San Juan College. Since the President and the Board of Trustees already supported the concept, it became imperative to involve the appropriate personnel and constituencies in an effort to gain acceptance of the project. Included in the process were the Dean of Fiscal Services, Dean of Instruction, Director of Institutional Planning and Research, Division Heads, Faculty, and the Director of Computing Services.

The benfits of a Computerized Assessment and Placement Program (CPT) were shared with them as follows:

Computerized Placement Testing (CPT)

(1) CPTs increase flexibility by allowing both on-demand testing and scheduled testing for both individual and groups. Convenience for the student is a major factor.

(2) CPTs increase accuracy in assessing student's entry-level skills for the entire range of skills covered by the instrument (Whereas, some tests discriminate poorly either at the upper or lower end of student skills).

(3) CPTs provide immediate on-line scoring feedback of students, to counselors, and advisors via printed reports or CRTs.

(4) CPTs reduce student frustrations with testing by generating appropriate questions based upon a student's previous response. All tests are different for each student and remain secure.

(5) CPTs are untimed and reduce test anxiety, especially for the physically challenged.

(6) CPTs can be completed in roughly one-half of the time of comparable paper and pencil tests. A lab technician/aid can supervise the Lab.

(7) CPT scores can be equated to other testing instruments and comparable cut-scores for placement in appropriate courses can be established.

(8) Like other standardized tests, normative data for CPTs are available for comparison and other uses.

(9) Hardware can be made available for other testing or developmental program uses.

Arrangements were made with the College Board (ETS) to provide us with 200 sets of tests to conduct a pilot study with selected students. The English and Math faculty were included in the process. The results provided student satisfaction information as well as comparative data for analysis with the current paper-pencil test. Additional research was conducted by visiting two Community Colleges who were using the College Board CPT program. The focus of the visit, by the Director of Computing Services and the Dean of Student Services was to find out what not to do. Several concerns surfaced; however, the major one was "Don't exclude your English and Math faculty in the development of your program". (Note: One program is still in operation and the other was discontinued. Why? One involved faculty and the other didn't).

The results of the pilot study confirmed that the CPTs would be able to produce the same or better results than our current assessment program.

Our Computing Services department, was requested to develop the technical requirements and cost estimates for full implementation of the Computerized Assessment and Placement system. Included in that system was a directive to include the electronic student identification card reading system that could produce

student transcripts, permits to enroll, student semester class schedules and access to the degree audit system which is still in the development stages. Another requirement was that the Assessment results be made available, on-line to the appropriate counselors, advisors (faculty) as well as other offices who may require the assessment information. Included with the Assessment results is demographic information about the student. It includes the following background questions:

(01) Name - address - SSN - telephone number.

(02) Semester - year of enrollment.

(03) Date of birth - Sex M/F.

(04) Ethnic background.

(05) Your current educational goal or reason for taking classes at SJC.

(06) Employment planned while enrolled.

(07) Highest level of education you have completed to date.

(08) Year of last enrollment in high school or college.

(09) How far will you travel from home to SJC?

(10) Your planned major or field of concentration.

(11) Considering transfering to another school?

(12) How do you expect to finance attending SJC?

(13) Would you like assistance in any of the following:

(a) Learning English

(b) Financial aid

(c) Improving reading skills

(d) Choosing a major or career

(e) Personal concerns

(f) Learning disability

(g) Physical disability

(h) Transportation to school

(i) Housing information

(j) Day care information

(k) Course tutoring.

The software program developed by the Computing Services department allows us to add or delete any number of questions in the background portion of the program. Advisement is enhanced with the results of the background questions and course recommendations. The information is available immediately to any computer terminal given access to the main frame and a hard copy can be printed for the student. The student is not allowed to leave the testing area with their results until a counselor or advisor has reviewed their scores and placement recommendation with them. It's important to note that students need appropriate clarification of the test results as soon as possible. Our research suggested that students who were not provided appropriate counseling/advising on their recommended placement, might not enroll if their scores were low.

The physical layout of the Assessment Lab was designed to provide immediate access by the Counseling department. Professional Counselors and Student Services Aides are readily available at the Lab. The system's technical setup was designed by Mr. Paull Holmes and Sharolyn Anderson of San Juan College Computing Services and includes the following:

> The CPT lab at San Juan College has been implemented using 15 IBM model 8530-E21 (Model 30/286) personal computers each with a 20 meg hard drive, VGA graphics, and a 8512 color monitor.
>
> To each of these machines, a Digital Equipment Corporation (DEC) DEPCA Ethernet communications board was added. This board allows each PC to communicate with one of the College's VAX computers; the VAX functioning as a file/disk server for the PC. This implementation of a PC LAN using DEC PCSA software has several advantages including making some of the PC files globally available to the College's VAX system which is its Administrative Computer system. Hence administrators/advisors that previously had administrative access now also have access to testing results.
>
> Another advantage/design parameter of this LAN arrangement is that the PC's run an ordinary implementation of DOS and thus are available for other applications besides the CPT testing.

We plan to evaluate the effectiveness of the test scores in placing students in courses. This will be done at the end of each semester. The results will assist us in determing if we need to modify the cut-scores to

improve the effectiveness of the recommended placements. We will also continue to ask the students for their evaluation of the system and provide feedback for appropriate revisions.

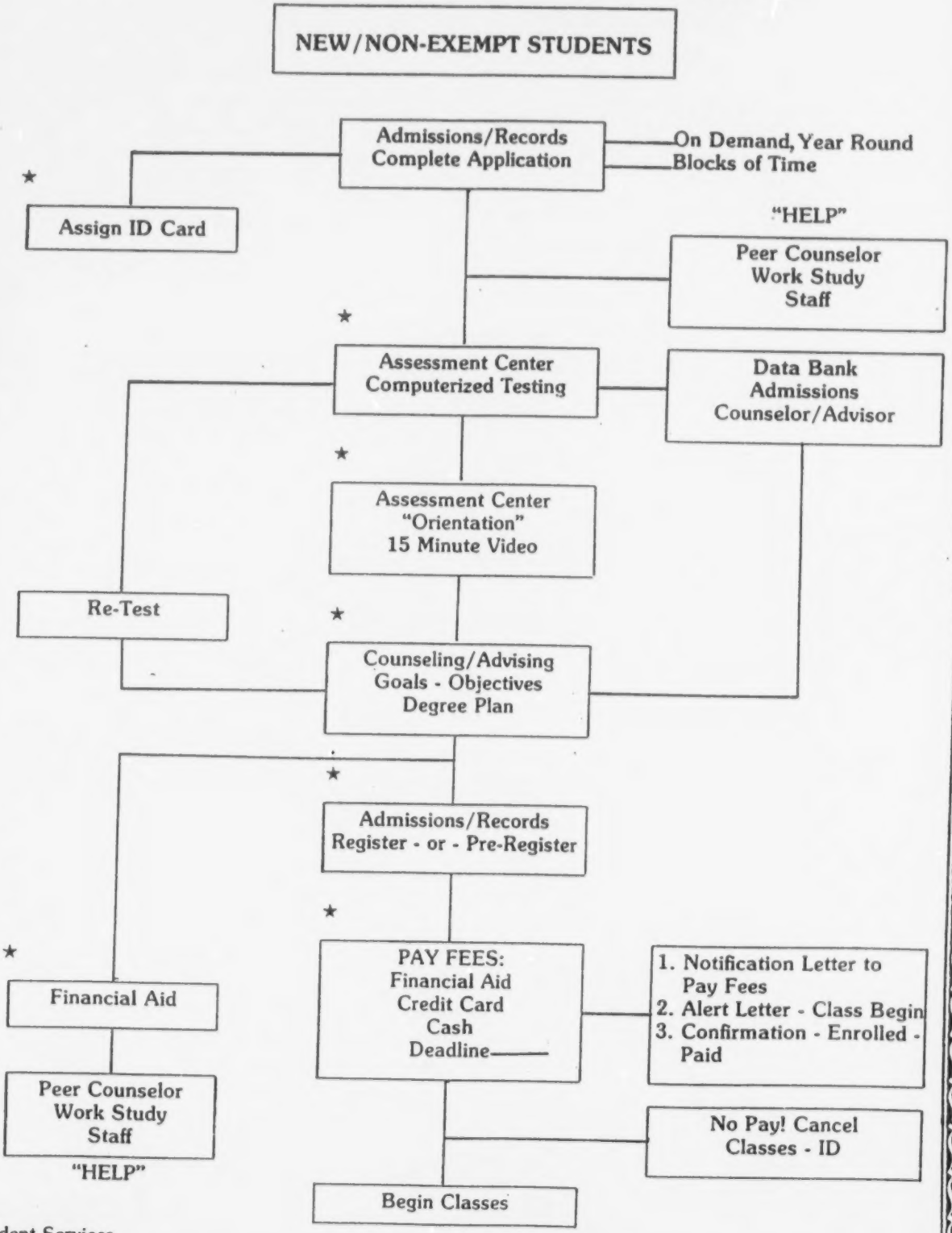
San Juan College is excited about this unique system, which has been designed to fit our special needs. Our staff is committed to sharing our professional knowledge and experience. Additional inquiries may be addressed to:

General Information:
Dan Chacon, Dean of Student Services

Technical information:
Paul Holmes, Director Computing Services

SAN JUAN COLLEGE
4601 College Boulevard
Farmington, NM 87401
(505) 326-3311.

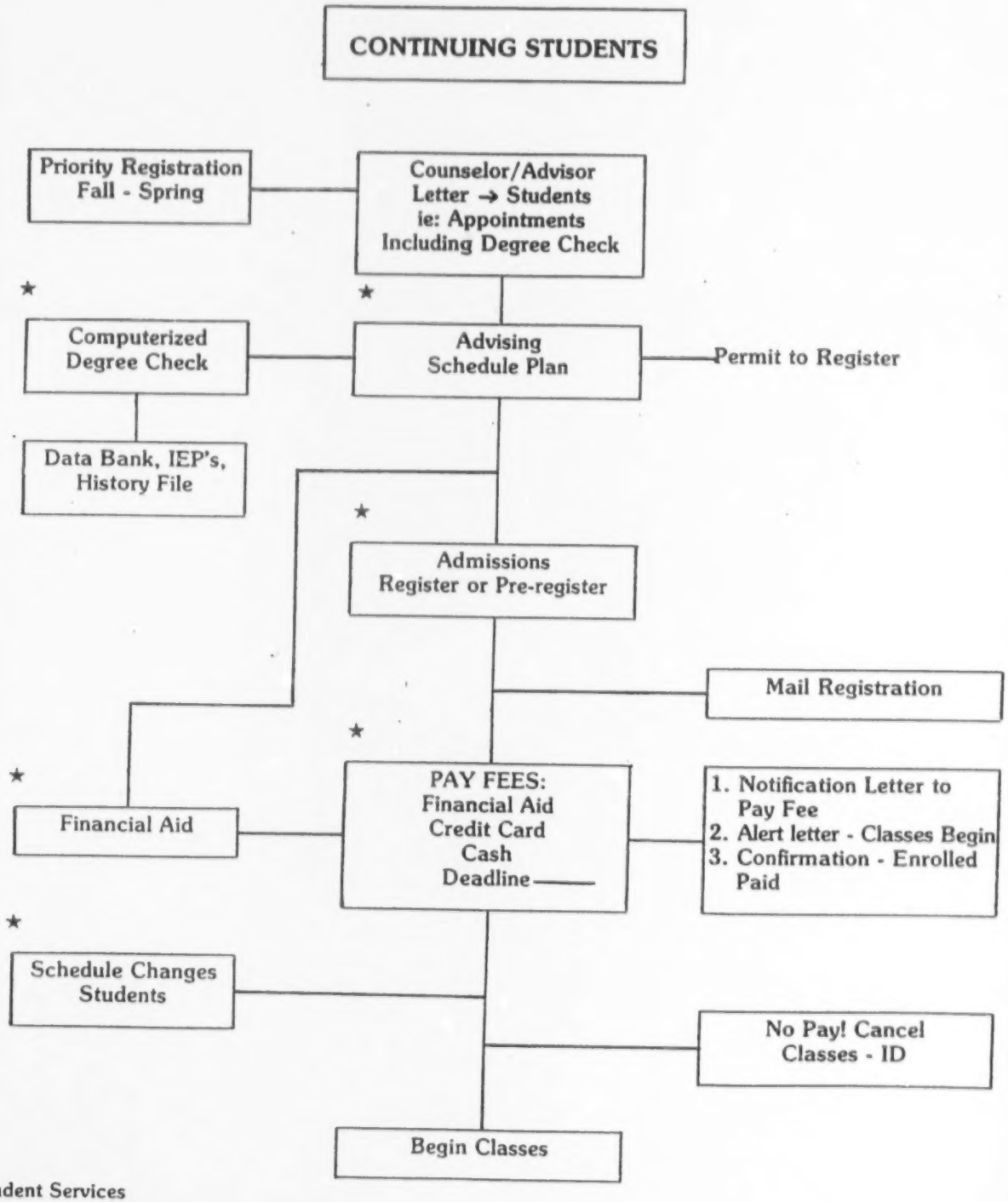
SAN JUAN COLLEGE
ADMISSION - ASSESSMENT - REGISTRATION



Student Services
Daniel Chacon
Dean of Student Services

sbw

SAN JUAN COLLEGE
ADVISING - REGISTRATION



Student Services
Daniel Chacon
Dean of Student Services

sbw

DEFINITIONS

NEW STUDENT	First time enrolling at San Juan College.
NON-EXEMPT	First time, seeking a degree/certificate, enrolling in a level(?) math/ English course(s).
EXEMPT	Have degree(s) - not seeking degree/certificate, not enrolling in level math/English, enrolling in five units or less, accumulated 18 + college level units.
ASSESSMENT	Establish basic skill level in reading, writing, math, and study skills.
DEGREE PLAN	Includes goals, IEP, major, and transfer? Four year school required courses.
STUDENT GOAL	Degree, transfer, certificate, job skill, recreational, and enrichment.
DROP-IN vs DROP-OUT	Students who do not attend continously.
ORIENTATION	Over view of college facilities, regulations, procedures, terminolgy, and services!
CONTINUING STUDENT	Students enrolled the semester prior to registration.
PRIORITY REGISTRATION	Only available to continuing students. Requires advisor/counselor approval. **Note:** all others register at open registration.

DRAFT

SAN JUAN COLLEGE
ASSESSMENT POLICY

The following is a recommended Assessment Policy for us to look at and discuss. After we coordinate our efforts and agree on a draft proposal, I recommend we send it to the IAC for review and their recommendations.

TITLE: Student Assessment for Basic Skills Placement and Success

PURPOSE: This policy establishes guidelines for student assessment for the purposes of placing students in basic skill courses which will help them succeed in their programs of study.

REQUIREMENTS: Assessment is required/mandatory of:

(1) All first-time college students and

(2) Students planning to enroll or enrolling in their first college English or Mathematics course.

EXEMPTIONS: Students are exempt from Assessment if:

(1) They have already completed an associate degree or higher (i.e., B.A., B.S., M.A., Ph.D., etc.)

(2) Are enrolling in less than 6 units and not enrolling in a first college English or Mathematics course.

PROCESS: Multiple Assessment measures are to be employed in arriving at final placement recommendations including, but not limited to:

(1) Assessment test results

(2) Student educational goals

(3) Student educational record

(4) Maturity/motivation

(5) English language facility

(6) Study skills

(7) Employment/family/activity commitments

Assessment results are to be organized and presented to students in a manner which enables them to understand their readiness to do college-level academic work.

Students will have the opportunity to challenge basic skills assessment results and recommended placements.

The basic skills Assessment and Placement program is designed to ensure equality and opportunity to help students succeed in their academic programs. The program is not intended to exclude students from programs of study.

San Juan College

STUDENT SERVICES

AT SAN JUAN COLLEGE

CONCEPT

The concept and continuing development of Student Services at San Juan College is to provide prospective and continuing students with immediate and comprehensive services. Services that will enable them to obtain information, be admitted, assessed, advised, register, and pay tuition/fees at one time and in one area. Convenience is a major factor with student satisfaction of services rendered.

ASSESSMENT

Why Computerized Placement Testing?

A. Computerized Placement Tests (CPT) offer a new method for evaluation of students to determine their abilities to cope with college level courses. Quick individualized assessment for placement uses technology to save time and prevent frustration for the student, and allows immediate scoring and generation of test results to aid college staff in placing students in suitable classes. The computer testing system is easy to use -- no experience with computers is necessary.

B. Advantages of computer testing include:

1. Each student may work at own pace.

2. Immediate scoring and print-out are available at completion of test to advisors, counselors and students via a CPT/Printer.

3. CPTs increse accuracy in assessing student's entry-level skills for the entire range of skills covered by the instrument (whereas some tests discriminate poorly either at the upper or lower ends of student skills).

4. Test security is provided by individual questions selection.

5. Testing time is reduced because student works at own pace.

6. Test anxiety may be reduced because tests are not timed (great for the physically challenged students).

7. Individual testing allows for flexibility of scheduling (staffing time/number reduced).

8. Re-test easily accomplished.

9. CPTs can be equated to other testing instruments and comparable cut-scores for placement in appropppriate courses can be established.

10. As a result of its features, CPTs may assist recruitment and reduced attrition during the enrollment process, and will increase student success in appropriate courses.

11. Initial costs in hardware may be offset by increased efficiencies, including reduced costs for test administration. Also, hardware can be made available for other testing (i.e., study skills, remedial/developmental programs).

Dan Chacon (11/1/89)
Dean of Student Services
San Juan College

SAN JUAN COLLEGE

Fall, 1989 Placement Report

NAME: CHACON, DANIEL R. ID: 527-84-0843

Major: Business Administration

Advisor: None

This report contains your recommended placement assignments in English, Reading, and Mathematics for the fall, 1989 semester. These assignments are based on your placement test scores and your intended major field of study. You should schedule a meeting with your advisor before September 8 to discuss these assignments and to obtain answers to any questions you may have.

Recommended Placement

English:	ENG 201
Reading:	
Mathematics:	MATH 211
O-1:	PSYCH 100
O-2:	

	Test Results				Retest Results			
Test	Date	Score	Serr	Pctile	Date	Score	Serr	Pctile
Reading	12/17/87	96.7	6.5	72	12/17/87	96.7	6.5	72
Sentence Skills	12/17/87	115.7	2.8	93	12/17/87	115.7	2.8	93
Arithmetic	12/17/87	102.3	6.2	78	12/17/87	102.3	6.2	78
Algebra	12/17/87	98.8	7.8	81	12/17/87	98.8	7.8	81

Responses to Background Questions

1. Your current educational goal or reason for taking classes at San Juan College.

   Transfer to a 4-year college or university

2. Employment planned while enrolled.

   Less than 20 hours per week

3. Highest level of education you have completed so far.

   High school diploma

4. How long has it been since you were last enrolled in a high schol or college for credit?

   3 or 4 years

5. Approximately how far from home to campus will you travel one way to attend classes?

   11-20 miles

6. Considering transfer to another school later?

   New Mexico State University (Las Cruces)

7. How do you expect to finance attending SJC? Type a "1" for each item that will be a source of college funds for you; leave the item blank if it will not be a source of funds for you.

   Scholarship or grant (Foundation scholarship, Pell grant, etc.)

8. Would you like assistance in any of the following areas? Type a "1" if your answer is "yes" or "maybe"; leave the item blank if your answer is "no."

   Financial aid
   Improving study skills
   Physical disability
   Course tutoring

Questions for CPT

9/18/89

Answer the following questions by typing in the requested information. When options are provided, type in the number of the option that is your best response to the question.

1. Name
   Last First MI

2. Address
   Street
   City State Zip Code

3. Plan to enroll at SJC:
   1. Fall
   2. Spring 19__ __
   3. Summer

4. Social Security Number

5. Telephone number

6. Date of birth

7. Sex
   1. Male
   2. Female

8. Ethnic background
   1. American Indian/Alaskan Native
   2. Asian American/Pacific Islander
   3. Black/Non-Hispanic
   4. Hispanic
   5. White/Non-Hispanic

9. Your current educational goal or reason for taking classes at San Juan College.
   1. Personal interest
   2. To improve basic skills
   3. To learn or improve job skills
   4. Transfer to a 4-year college or university
   5. Earn a job-oriented certificate or degree from SJC
   6. Earn an academic (transfer) degree from SJC
   7. Other

10. Employment planned while enrolled.
   1. Full-time (35 hours or more per week)
   2. 20-35 hours per week
   3. Less than 20 hours per week
   4. Seeking work
   5. Not seeking work

11. Highest level of education you have completed so far.
    1. Less than high school
    2. High school diploma
    3. GED certificate
    4. Some college work, no degree
    5. College or trade school certificate or diploma
    6. Associate (2-year) degree
    7. Bachelor's (4-year) degree
    8. Master's, doctor's, or professional degree

12. How long has it been since you were last enrolled in a high school or college for credit?
    1. Less than 1 year
    2. 1 or 2 years
    3. 3 or 4 years
    4. 5-9 years
    5. 10 years or more

13. Approximately how far from home to campus will you travel one way to attend classes?
    1. Less than 5 miles
    2. 5-10 miles
    3. 11-20 miles
    4. 21-30 miles
    5. 31-50 miles
    6. More than 50 miles

14. From the list at your computer, type in the number of your educational major or program. Type 999 if you are undecided about a major or field of concentration.

15. Considering transfer to another school later?
    1. Not planning to transfer
    2. Undecided about transfer
    3. University of New Mexico (Albuquerque)
    4. New Mexico State University (Las Cruces)
    5. Other New Mexico 4-year university
    6. Fort Lewis College (Durango, CO)
    7. Other 4-year institution out-of-state
    8. A two-year college
    9. A trade program

How do you expect to finance attending SJC? Type a "1" for each item that will be a source of college funds for you; leave the item blank if it will not be a source of funds for you.

16. Personal funds (employment, savings, etc.)

17. Parents, spouse, or other relatives

18. Scholarship or grant (Foundation scholarship, Pell grant, etc.)

19. Loan, work-study, JTPA

20. BIA or other Agency or Tribal support

21. Veteran's benefits

22. Other aid

Would you like assistance in any of the following areas? Type a "1" if your answer is "yes" or "maybe"; leave the item blank if your answer is "no."

23. Learning English

24. Financial aid

25. Improving reading skills

26. Improving study skills

27. Choosing a major or career

28. Personal concerns

29. Learning disability

30. Physical disability

31. Transportation to school

32. Housing information

33. Day care information

34. course tutoring

IRP- March 6, 1989.

SAN JUAN COLLEGE
REACTIONS TO CPT TESTING
FEBRUARY, 1989

SJC Percents			
All Resp. N=153	Verbal N=66	Math N=132	Percents Comparison: Miami-Dade*
			1. How difficult was the verbal part of the test for you? (that is, Reading and/or Sentence Skills)
2.0	4.6	-	2
11.1	25.8	-	22
26.8	62.1	-	68
2.6	6.1	-	4
0.7	1.5	-	1
56.9	-	65.9	3
			1. much too difficult 2. somewhat too difficult 3. just about right 4. somewhat too easy 5. much too easy 6. did not take either of the verbal parts
			2. How difficult was the mathematics part of the test for you? (that is, Arithmetic and/or Algebra)
3.9	-	3.8	9
39.2	-	45.5	33
37.9	-	43.9	68
4.6	-	5.3	10
0.7	-	0.8	3
13.7	31.8	-	-
			1. much too difficult 2. somewhat too difficult 3. just about right 4. somewhat too easy 5. much too easy 6. did not take either of the mathematical parts
			3. Did you feel challenged to do as well as you could on the test?
9.2	7.6	9.8	7
49.7	53.0	45.5	55
41.2	39.4	44.7	38
			1. not at all 2. somewhat 3. very much
			4. In comparison with a paper and pencil test, did you find the computerized test...
37.9	53.0	35.6	46
50.3	38.1	53.8	42
11.8	1.5	10.6	12
			1. more challenging than a paper and pencil test 2. about the same as a paper and pencil test 3. less challenging than a paper and pencil test

* Computerized Adaptive Testing: The State of the Art in Assessment at Three Community Colleges. League for Innovation in the Community College, 1988, p. 33.

SJC Percents			
All Resp. N=153	Verbal N=66	Math N=132	Percents Comparison: Miami-Dade*
11.3	10.6	12.1	9
33.3	39.4	30.3	31
37.3	37.9	38.6	37
17.6	12.1	18.9	23
26.1	33.3	24.2	42
24.2	30.3	24.2	20
49.7	36.4	51.5	38
6.5	6.1	7.5	6
33.3	40.9	32.5	33
60.1	53.0	59.3	61
62.7	51.5	62.9	75
28.8	37.9	29.5	20
7.8	10.6	6.8	5
0.7	0.0	0.8	-
9.2	13.6	9.1	10
37.5	39.4	37.1	31
53.3	47.0	53.0	59
50.3	54.5	48.5	68
21.6	25.8	22.0	17
28.1	19.7	29.5	15

5. **Did nervousness while taking the test prevent you from doing your best?**

   1. yes, definitely
   2. yes, somewhat
   3. probably not
   4. definitely not

6. **Which would make you more nervous, a paper and pencil test or a computer-administered test?**

   1. a paper and pencil test
   2. a computer administered test
   3. they'd be about the same

7. **Did you feel any pressure to complete the test quickly?**

   1. yes, a great deal of pressure
   2. yes, some pressure
   3. no

8. **How easy was it to use the computer to take the test?**

   1. very easy
   2. reasonably easy
   3. somewhat difficult
   4. very difficult

9. **In comparison with a paper and pencil test of the same length, did you find the computer test...**

   1. more tiring than a paper and pencil test
   2. about the same
   3. less tiring than a paper and pencil test

10. **Which would you prefer to take?**

    1. a computer administered test
    2. a paper and pencil test
    3. do not prefer one over the other

San Juan College

ADVICE FROM ASSESSMENT "PIONEERS"

Involve faculty at the outset. Tap their knowledge and opinions. Rely on faculty to pose the key questions and to propose ways to answer those questions.

Provide sufficient resources — especially at the department level.

Communicate with students about assessment plans. Be sure they understand how assessment activities will (or won't) affect them.

Use plain English. Don't get hung up on psychometric or other jargon.

Get started, try something, expecting some change in direction as you learn more.

BUT. . .

Don't scramble to do just anything. Don't run for the first test you hear about.

Start modestly, if necessary, but be clear that the effort is not intended to be short-term.

Recognize that most successful comprehensive assessment efforts have taken years to develop.

Don't let assessment become just another assignment for some administrative office.

Stress that the process should lead to improvements in the educational experience for students. Don't mix assessment procedures with procedures to evaluate faculty.

(from "Thinking About Assessment" - June 1987 - Jack E. Rossman & Elaine E. L. Khawas)

Dan Chacon (03/31/89)
Dean of Student Services
San Juan College

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